

REMARKS

Applicants have carefully reviewed and considered the Examiner's Office Action dated June 14, 2006. Reconsideration is respectfully requested in view of the foregoing amendments and the comments set forth below.

By this Amendment, claims 3, 5, 8 and 9 are amended. Accordingly, claims 1, 3, 5-7, 7-12, 14-17, 19 and 20 are pending in the present application.

Claims 3-4 were objected to because of the informality noted in paragraph 1 of the Action. The disclosure at paragraphs [0010] and [0013] is clear that one embodiment of the invention employs a different separation device for separating the fibers of a different filter material. Claim 3 has been amended to clearly recite this embodiment, which is narrower than the embodiment of the independent claim 1. Paragraph [0025] of the present application discloses an embodiment where at least two separating devices are employed to separate the fibers of one type of filter material. It is submitted that claims 3-4 clearly recite an embodiment employing at least two separating devices where one type of filter material is separated by one of the two separating devices and the second type of filter material is separated by the second separating device. Accordingly, withdrawal of the objection to claims 3-4 is respectfully requested.

Claims 8-9 were rejected under 35 U.S.C. §112, second paragraph for the reasons set forth in paragraph 3 of the Action. Claims 8 and 9 have been amended to depend from claim 3, which provides sufficient antecedent basis for the recitation of "at least two types of filter material". In view of the foregoing, it is believed that claims 8-9 are fully definite under 35 U.S.C. §112, second paragraph. Withdrawal of the rejection under 35 U.S.C. § 112, second paragraph is respectfully requested.

Claims 1, 7, 11-12, and 14-16 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,857,657 to Teed for the reasons set forth in paragraph 5 of the Action. This rejection is respectfully traversed.

Teed is directed to a fiberizing and pad forming apparatus that employs a fiberizing device 20 for breaking a sheet S of pulp-fibers into substantially individual fibers F (column 4, lines 6-10 of Teed). However, fiberizing device 20 does not receive fibers in the direction of a longitudinal axis of device 20, as required by claims 1, 5 and 11. To the contrary, Teed discloses that the sheet S of pulp-fibers contacts the periphery of device 20 so that teeth 21 (Fig. 3) or cylindrical discs 22 (Fig. 2) break the sheet into individual fibers. That is, the sheet S is introduced perpendicular to the longitudinal axis of the fiberizing device 20, as opposed to “said fibers being introduced in the direction of a longitudinal axis of the at least one separating device” or the “the fibers being introduced in the direction of a longitudinal axis of each of the at least two separating devices” (Claim 1, lines 3-5, or claim 11, lines 4-6 and claim 5, lines 4-5, respectively). Consequently, Teed cannot anticipate independent claims 1 and 11 and their depending claims 7, 12 and 14-16 because Teed fails to disclose each and every feature of the claims.

It is the Examiner’s position that a “broad” reading of the claims would include two “separating devices”: one that separates the sheet into individualized fibers as required by the method claims and a second so-called “separating device” that simply conveys the separated fibers through a continuous, elongate, enclosed air conduit 50. However, a correct interpretation of the claims would require the “at least one separating device” to 1) receive fibers along its longitudinal axis, 2) separate the received fibers into

individual fibers and 3) have at least one rotating separating element that tears the fibers apart and accelerates the separated, individualized fibers. The definite article “the” before “at least one separating device” in line 7 of claim 1 and line 5 of claim 11 is clear that the same device through which the fibers are introduced along its longitudinal axis separates the fibers into individual fibers and has at least one separating element rotating about a rotational axis. Consequently, the at least one separating device of the claimed invention must meet all three features. Teed does not disclose a separating device that meets features 1)-3) as set forth above. Instead, the Examiner believes that one device can meet one of the features, while a second device can meet a second feature. This is improper claim interpretation and not a “broad” reading of the claims.

The air tunnel 50 of Teed does not separate the fibers into individual fibers and does not have at least one separating device that rotates about a rotational axis. Thus, air tunnel 50 cannot meet the features of the recited “at least one separating device”. Similarly, Teed does not disclose a method that introduces fibers with a finite length to at least one separating device where the fibers are introduced in the direction of the longitudinal axis of the device as Teed introduces the fibers perpendicularly to the external periphery of the fiberizing device. Claims 1 and 11 are clear that the fibers are introduced along a longitudinal axis of the at least one separating device and then the fibers are separated in *the* at least one separating device, which has a separating element rotating about a rotational axis. To the contrary, Teed discloses separating the fibers with one device and then introducing the fibers along a longitudinal axis of another device. This is not the claimed invention. Accordingly, Teed cannot anticipate claims 1, 7, 11-

12, and 14-15. Withdrawal of the rejection under 35 U.S.C. §102 (b) is respectfully requested.

Claims 1, 7, 11-12, and 14-16 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,701,294 to Radwanski et al. (hereinafter referred to as “Radwanski”) for the reasons set forth in paragraph 6 of the Action. This rejection is respectfully traversed.

Radwanski is directed to an improved apparatus and method for forming a fibrous web where a frangible material 16 is moved along an inlet channel 12 until it reaches a rotatable drum 14 and then the material 16 is moved along the outer periphery of the drum 14. Movable striking elements, such as hammer elements on rotatable drum 14, are located in a fiberizing zone 26A, which is on the outside the periphery of rotatable drum 14. Thus, Radwanski does not disclose “introducing fibers with a finite length to at least one separating device, said fibers being introduced in the direction of a longitudinal axis of the at least one separating device”, as required by independent claims 1 and 11.

Instead, Radwanski discloses an embodiment in which the movable striking means comprises a generally cylindrical hammer drum 14 which is rotatable about an axle 56 in the direction indicated by arrow 90. While the drum is rotatable and it has hammer striking means to separate fibers, essentially all of the injected gas stream entraining the fibers moves along a path that is substantially co-directional with the movement direction of the hammer elements on drum 14. See column 4, lines 61-64 and column 6, lines 44-48 of Radwanski. That is, Radwanski does not disclose introducing fibers along the longitudinal axis of the hammer drum 14. To the contrary, Radwanski discloses introducing the fibers in a direction perpendicular to the longitudinal axis of the

hammer drum or a separating device. Consequently, Radwanski fails to anticipate claims 1 and 11 and their depending claims 7, 12 and 14-16 because Radwanski fails to disclose each and every feature of the claims. Withdrawal of the rejection under 35 U.S.C. §102 (b) is respectfully requested.

Claims 1, 3-5, 8-10, 17 and 19-20 were rejected under 35 U.S.C. §103(a) as being unpatentable over GB 2145918 to Arthur et al. (hereinafter referred to as “Arthur”) in view of Teed or Radwanski as explained in paragraph 8 of the Action. This rejection is respectfully traversed.

Independent claim 1 requires “introducing fibers with a finite length to at least one separating device, said fibers being introduced in the direction of a longitudinal axis of the separating device”. Independent claim 5 requires “introducing fibers with a finite length to at least two separating devices, ..., said fibers being introduced in the direction of a longitudinal axis of each of the at least two separating devices”.

Arthur does not disclose the recited introducing of fibers in the direction of a longitudinal axis of the separating device. That is, Arthur does not disclose fibers being introduced “running or placed lengthwise” (common definition of “longitudinal” - see attached dictionary definition) along the length of the roller 16. That is, Arthur does not disclose the introduction of fibers in the direction of a longitudinal axis of a separating device as required by claims 1 and 5 of the present invention. Instead, Arthur introduces fibers transverse to the rotational axis of the roller 16, or perpendicular to the periphery of the roller. As argued above, neither Teed, nor Radwanski discloses introducing of fibers along a longitudinal axis of the separating device. Consequently, one of ordinary skill in the art would not have been motivated to modify Arthur as claimed by Applicants. In

that none of the applied references discloses, let alone suggests (to the contrary, they teach against), the separation of fibers into individual fibers when they are introduced along a longitudinal axis of the separating device, it is respectfully submitted that any combination of the prior art of record would not render the claimed invention obvious. Withdrawal of the rejection of independent claims 1 and 5 and depending claims 3-4, and 8-10 under 35 U.S.C. §103(a) is requested.

Independent claim 17, lines 10-13 requires “a conveyor downstream of the at least two separating devices ...[each separating device] comprising at least one separating element having a rotational axis oriented essentially parallel to a conveying direction of the conveyor”. Arthur teaches positioning its separating device (roller 16) with its longitudinal axis perpendicular to the conveying direction of a carrier stream. This position is favorable in order to feed a stream of continuous filaments of filler material onto a pin roller by which they are broken and collected on the carrier stream. One of ordinary skill in the art would never consider placing a separating device for receiving continuous filaments with its longitudinal axle parallel to the conveying direction because one would not be able to process continuous filaments as the broken filaments would fall in a different position.

Arthur's method processes a continuous filament, whereas the claimed invention is directed to processing fibers of finite length. Teed does not disclose an apparatus where the rotational axis of the fiberizing device 20 is parallel to the conveyor 30. Teed, like Arthur, is directed to a sheet of fibers being introduced to the device that processes them. Radwanski may disclose a parallel rotation axis to that of the conveyor, but it is concerned with fibers of finite length. As argued above, there is a technical reason for

positioning a roller that breaks up a continuous fiber in a different manner than a system for processes finite fibers. Accordingly, it is submitted that it is improper to combine technical features of an apparatus processing continuous filaments with technical features of apparatuses processing fibers of finite length. One of ordinary skill in the art would not have been motivated to modify an apparatus processing a continuous filament based on teachings in apparatuses processing fibers of finite length.


Furthermore, Arthur discloses a single separating device, as do both the secondary devices taught by Teed and Radwanski, whereas claim 17 requires two separating devices to respectively separate fibers of one type of filter material. There is no suggestion or motivation to modify the Arthur to have more than one separating device, let alone an arrangement with two separating devices where each of the rotational axis of the separating devices are essentially parallel to the conveying direction of the conveyor. Accordingly, it is submitted that independent claims 17 and its depending claims 19-20 are not rendered obvious by Arthur in view of either Teed or Radwanski. Withdrawal of the rejection of independent claim 11 and depending claims 19-20 under 35 U.S.C. §103(a) is requested.

In view of the foregoing, it is respectfully submitted that claims 1, 3-5, 7-12, 14-17 and 19-20 are allowable over the prior art of record. Reconsideration of the application and an issuance of a Notice of Allowance are earnestly solicited.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is hereby invited to telephone the undersigned at the number provided.

Respectfully submitted,

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long-ies (lɒn'ez) *n. pl.* [Colloq.] LONG JOHNS
long-ing (lɒn'ɪŋ) *n.* [see LONG²] strong desire; yearning — *adj.* feeling or showing a yearning — **long-ingly** *adv.*
Long-i-nus (lɒn jɪ'nəs), **Dionysius Cassius** c. A.D. 213-273; Gr. Platonic philosopher & rhetorician
long-ish (lɒn'ɪʃ) *adj.* somewhat long
Long Island [descriptive] island in SE N.Y.; between Long Island Sound & the Atlantic; 1,411 sq. mi. (3,655 sq. km)
Long Island Sound arm of the Atlantic, between N Long Island & S Conn.; c. 100 mi. (161 km) long
long-i-tude (lɒn'jə tʊd', -tyʊd'; lɒn'-) *n.* [ME < L *longitudo* < *longus*, LONG¹] 1 length 2 distance east or west on the earth's surface, measured as an arc of the equator (in degrees up to 180° or by the difference in time) between the meridian passing through a particular place and a standard or prime meridian, usually the one passing through Greenwich, England; see LATITUDE, illus. 3 **Astron.** see CELESTIAL LONGITUDE
long-i-tu-dinal (lɒn'jə tʊd'n əl, -tyʊd'n) *adj.* [ML *longitudinalis*] 1 of or in length 2 running or placed lengthwise: opposed to TRANSVERSE 3 of longitude 4 designating or of studies dealing with the development of an individual or group over a period of years — **long-i-tu-di-nal-ly** *adv.*
long johns [Colloq.] long underwear, usually covering the legs to the ankles
long jump a track and field event that is a jump for distance rather than height, made either from a stationary position or with a running start
long-leaf pine (lɒn'leɪf) a pine (*Pinus palustris*) native to the S U.S., having very long needles and valued for its hard, heavy wood
long-lived (lɒn'lɪvd', -lɪvd') *adj.* [LONG¹ + -LIVED] having or tending to have a long life span or existence
long measure LINEAR MEASURE
Long-mont (lɒn'mənt') [after LONGS PEAK + Fr *mont*, mountain] city in NC Colo.: pop. 43,000
long moss SPANISH MOSS
Longo-barb (lɒn'gɔ bɑrd') *n., pl.* -bards' or **Longo-bar'di** (-bɑrd'e) [L. *Longobardus* < L. *Langobardus*; see LOMBARD] LOMBARD (n. 2) **Longo-bar'dic** *adj.*
Long Parliament the English Parliament that met in 1640, was expelled by Cromwell in 1653, reconvened briefly in 1659, and was dissolved in 1660
long pig human flesh or a human body as food for cannibals: from the Maori and Polynesian term
long-range (lɒn'rænʃ) *adj.* 1 designating or of a gun, aircraft, missile, etc. that has a range of great distance 2 taking the future into consideration (*long-range plans*)
long-run (-run') *adj.* extending over a long time
long-shore (-shɔr') *adj.* [aphetic for ALONGSHORE] existing, occurring, working, etc. along the shore or waterfront — *adv.* along the shore
long-shore-man (-shɔr'mən) *n., pl.* -men (-mən) [prec. + MAN] a person who works on a waterfront loading and unloading ships; stevedore
long shot 1 [Colloq.] a) in betting, a choice that has only a slight chance of winning and, hence, carries great odds b) any venture with only a slight chance of success, but offering great rewards if successful 2 *Film, TV* a scene shot with or as with the camera at some distance from the subject or action — *not by a long shot* [Colloq.] absolutely not
long-sighted (lɒn'sɪtɪd) *adj.* FARSIGHTED — **long-sighted-ly** *adv.* — **long-sighted-ness** *n.*
long-some (-səm) *adj.* [ME *langsum* < OE < *lang*, LONG¹ + *-sum*, SOME¹] [Dial.] lengthy; overly long; tedious
Longo Peak (lɒnz) [after S. H. Long (1784-1864), U.S. engineer] peak in Rocky Mountain National Park, NC Colo.: 14,255 ft. (4,345 m)
long-spur (lɒn'spɜr') *n.* [LONG¹ + SPUR] any of a genus (*Calcarius*, family Emberizidae) of northern passerine birds distinguished by their long hind claws
long-standing (-standɪŋ) *adj.* having continued for a long time
long-standing *adj.* having continued for a long time
long-street (lɒn'stri:t), **James** 1821-1904; Confederate general in the Civil War
long-suffering (-sufərɪŋ) *adj.* bearing injuries, insults, trouble, etc. patiently for a long time — *n.* long and patient endurance of injuries, insults, trouble, etc. Also [Archaic] **long-sufferance** — **long-sufferingly** *adv.*
long suit 1 *Card Games* the suit in which a player holds the most cards 2 something at which one excels
long-term (-tɜrm') *adj.* 1 for or extending over a long time 2 designating or of a capital gain, loan, etc. that involves a relatively long period
long time (-tɪm') *adj.* over a long period of time
Longueuil (lɒŋ gə'l; Fr lɒŋ gə'y) [after Charles Le Moyne de Longueuil (1626-85), Fr. colonist] city in S Quebec, on the St. Lawrence: a suburb of Montreal: pop. 124,000
longueur (lɒŋ gɜr'; E lɒŋ gar') *n.* [Fr] a long, boring section, as in a musical work, etc.
long view (lɒn'vyu) [from the "view" afforded by its altitude] city in N Tex.: pop. 63,000
long-waisted (lɒn'wəstɪd) *adj.* unusually long between shoulders
long-wave an electromagnetic wave that is longer than those used in commercial broadcasting, usually a radio wave longer than 1,000 meters, and below 300 kilohertz in frequency — **long-wave** *adj.*
long ways (-wəz') *adv.* LENGTHWISE

long-winded (-wɪn'dɪd) *adj.* 1 capable of considerable exertion without getting out of breath 2 a) speaking or writing at great, often tiresome length b) tiresomely long (said of a speech, writing, etc.) — **long-wind'ed-ly** *adv.* — **long-wind'ed-ness** *n.*
long-wise (-wɪz') *adv.* LENGTHWISE
loo (loo) *n.* [contr. < *lanterloo* < Fr *lanturelu*, name of the game, orig. fanciful word in refrain of a 17th-c. song] a former card game played for a pool made up of stakes and forfeits — *vt.* to cause to pay a forfeit at loo
loo (loo) *n.* [Fr *lieux*, short for *les lieux d'aisances*, toilets, lit., places of conveniences] [Brit. Slang] a toilet
looby (loo'bɪ) *n., pl.* -bies [ME *loby*, prob. akin to LOB, LUBBER] [Chiefly Dial.] a big, clumsy fellow; lout
loo-fah (loo'fə) *n.* [Ar *lūfah*] LUFFA
loo-jie or **loo-ley** (loo'jɪ) *n.* [Mil. Slang] a lieutenant
look (look) *vi.* [ME *loken* < OE *locian*, akin to OS *lōkōn*, OHG *luogēn* (Ger dial. *lügen*), to spy after, look for] 1 to make use of the sense of sight; see 2 a) to direct one's eyes in order to see b) to direct one's attention mentally upon something 3 to try to see or find something; search 4 to appear to be; seem [to look sick] 5 to be facing or turned in a specified direction 6 to expect: followed by an infinitive — *vt.* 1 to direct one's eyes on [to look someone in the face] 2 to express by one's looks, or appearance [to look one's disgust] 3 [Rare] to bring to a certain condition by looking 4 to appear as having attained (some age) [to look one's years] — *n.* 1 the act of looking; glance 2 outward impression; appearance; aspect [the look of a beggar] 3 [Colloq.] a) [usually pl.] appearance; the way something seems to be [from the looks of things] b) [pl.] personal appearance, esp. of a pleasing nature [to have looks and youth] — *interj.* 1 see! 2 pay attention! — **SYN.** APPEARANCE — *it looks like* 1 it seems that there will be [it looks like rain] 2 [Colloq.] it seems as if — **look after** to take care of; watch over — **look alive** (or sharp) [Colloq.] to be alert; act or move quickly: usually in the imperative — **look back** to recall the past; recollect — **look down on** (or upon) 1 to regard as an inferior 2 to regard with contempt; despise — **look for** 1 to search or hunt for 2 to expect; anticipate — **look forward** to anticipate, esp. eagerly — **look in** (on) to pay a brief visit (to) — **look into** to examine carefully; investigate — **look on** 1 to be an observer or spectator 2 to consider; regard (as) [they looked on her as a born leader] — **look (like) oneself** to appear to be in normal health, spirits, etc. — **look out** to be on the watch; be careful — **look out for** 1 to be wary about 2 to take care of — **look over** to examine; inspect — **look to** 1 to take care of; give attention to 2 to rely upon; resort to 3 to look forward to; expect — **look up** 1 to search for in a book of reference, etc. 2 [Colloq.] to pay a visit to; call on 3 [Colloq.] to get better; improve — **look up and down** 1 to search everywhere 2 to examine with an appraising eye; scrutinize — **look upon** to think of (as); consider [to look upon housework as boring] — **look up to** to regard with great respect
look-a-like (look'ə lɪk') *n.* a person of thing that resembles or is made to resemble another that is famous, prestigious, etc.
looker (-ər) *n.* 1 a person who looks *2 [Slang] a handsome person; esp., a pretty woman
looker-on (look'ər ən') *n., pl.* look'ers-on' an observer or spectator; onlooker
look-in (look'in') *n.* 1 a quick glance 2 a brief visit
looking glass a (glass) mirror
look-out (look'out') *n.* 1 an alert, careful watching for someone or something 2 a place for keeping watch, esp. a high place affording an extensive view 3 a person detailed to watch; sentry 4 [Chiefly Brit.] outlook, esp. for the future 5 [Colloq.] concern; worry (that's your look-out!)
Lookout Mountain [descriptive] mountain ridge in Tenn., Ga., & Ala.: the section near Chattanooga was the site of a Civil War battle (1863) in which Union forces defeated the Confederates: highest point, 2,125 ft. (647 m)
look-say method (look'sā) a method of teaching beginners to read by memorizing and recognizing whole words, rather than by associating letter with sounds: cf. PHONICS (sense 2) Also **look-and-say method** (look'and sā)
look-see (look'sɛ) *n.* [Colloq.] a quick look or inspection
loom (loom) *n.* [ME *lome* < OE (*geloma*, tool, utensil)] 1 a machine for weaving thread or yarn into cloth 2 the art of weaving: usually with the 3 [ON *hlumr*] the part of an oar or paddle between the handle and the blade — *vt.* to weave on a loom
loom (loom) *vi.* [earlier *lome*, *loom* < ?] to appear, take shape, or come in sight indistinctly as through a mist, esp. in a large, portentous, or threatening form: often with up [the peak loomed up before us] Also used figuratively [the specter of war loomed ahead] — *n.* a looming appearance, as of a ship in the fog
loom (loom) *n.* [Brit. Dial.] LOON¹
LOOM Loyal Order of Moose
loon (loon) *n.* [altered (by assoc. with fol.) < earlier *loom* < ON *lomr* < IE echoic base **la-* > L *latrare*, to bark] any of an order (Gaviiformes) of fish-eating, diving birds, with a sharp bill and webbed feet, found mainly in subarctic regions: noted for its weird cry
loon (loon) *n.* [Scot *loun*, *loun* < ME *lowen* < ? or akin to MDu *loen*] 1 a clumsy, stupid person 2 a crazy person 3 [Scot.] a boy b) a harlot 4 [Archaic] a) a person of low rank b) a rogue
at, ate, cār, ten, ēve; is, ice; gō, hōrn, look, tōol; oil, out; up, far; a for unstressed vowels, as in ago, u in focus; * as in Latin (lat'n); chin; she; zh as in azure (azh'ər); thin; the; ŋ as in ring (rɪŋ)
In etymologies: * = unattested; < = derived from; > = from which
* = Americanism
See inside front and back covers